# THE ECONOMIC CHALLENGES OF THE CORONA PANDEMIC: SOLUTIONS IN PROPOSED SCENARIOS IN IRAQ

# Najlah shamoon shlaymoon, University of Al Mustansiriyah Eman Abdel Rahim Kazem, University of Al Mustansiriyah

#### ABSTRACT

In the present paper authors provided some of role in Economic crises, natural disasters, and political instability that negatively affect the economy of a particular country or a group of countries, so the indebtedness rates increase dramatically, and the demand for oil decreases with the stability of its price, or its rise, but the countries are not able to buy sufficient quantities of it, so they are forced to raise its local prices, in order to be able to reach a close equilibrium degree between the international and local price.

Keywords: Economic Challenges, Iraq, Corona Pandemic

#### **INTRODUCTION**

During the year 2020, the world witnessed a severe demand shock for oil and its derivatives; as a result of the outbreak of the Coronavirus in most countries of the world, especially developed countries, and even countries that did not record injuries also closed the borders, for fear of the virus entering their territories.

This epidemic resulted in paralysis of the global economy alike, due to prevention and home quarantine measures, in addition to the fact that many countries declared a state of emergency. Naturally, these measures led to the suspension of work in most aspects of economic life. Only the services, electricity, and telecommunications sector, led by the health sector, remained engaged, which resulted in the loss of millions of workers and employees around the world. Many countries have taken measures to alleviate the severity of the crisis by granting benefits to the unemployed and distributing aid to families.

As a result of the aggravation of the Coronavirus crisis day after day, its repercussions exceeded the health crisis to include the entire economy, as the signs of the crisis began to be clear in most countries of the world, including Iraq, and its impact in Iraq was not limited to the government level through an increase in the budget deficit as a result of low oil prices but was reflected on all economic interests and at all levels, particularly the private sector and individuals, which portends an additional problem that Iraqi society may face in the next few periods.

Perhaps what may make the crisis more dangerous is the Iraqi economy's reliance on oil as a mainstay in the state's public resources, and the economy is one of the most important aspects of measurement of the repercussions caused by the epidemic, as the interests of citizens have been disrupted in a country that suffers from increased poverty rates and the absence of job opportunities, as well as the dependence of a large number of its citizens on daily income, which has become non-existent as a result of the compulsory curfew, with the government's almost complete inability to provide real measures that would reduce the losses of companies and individuals, as a result of the scarcity of budget resources.

First: The (Corona Virus) pandemic and its economic and financial effects on the countries of the world

The outbreak of the Coronavirus (Covid-19) is not the first time that the world has witnessed an outbreak of an epidemic and the attendant human and economic losses, in 2003 the SARS virus also spread in China, but the Coronavirus turned from an epidemic to a pandemic to spread in most countries of the world, which left negative effects at all levels, as the negative effects of the spread of the emerging coronavirus exceed the direct human losses in the form of the increasing numbers of deaths and infections with the virus, to extend to include many dire economic effects that warn of the possibility of entering the global economy into an unpredictable recession.

With all its repercussions at this moment, this made many countries take unprecedented measures such as closing borders and airports, as well as imposing a curfew in some cities, in an attempt to limit the spread of the virus. As well as, there are the efforts of governments and international economic organizations to mitigate the negative effects of the spread of the virus on the global economy. The most important economic and financial effects on the countries of the world can be summarized as follows:

#### **Economic Growth**

The economic effects of the spread of the new Coronavirus are numerous and profound, as it led to a decline in the growth rates of the global economy as a result of three main channels:

First, the supply side is affected by the disruption of production as a result of HIV infections, as well as the measures to contain it.

Second: The demand side is affected globally, especially in the tourism and entertainment sectors.

**Third**: The spread of these affects globally as a result of the transmission of the virus across borders, as well as a result of the decline in global demand rates in the major industrialized countries and China.

On the other hand, there are some beneficiaries of the spread of the Coronavirus, as carbon dioxide emission rates have decreased as a result of the decline in global industrial activity, as well as the possibility of benefiting many other sectors such as pharmaceuticals, communications, and e-commerce companies.

In light of the outbreak of the Corona epidemic, the International Monetary Fund believes that the current health crisis has a severe impact on global economic activity, and the growth rate of the global economy is expected to contract sharply by 3% in 2020, but the global economy is expected to grow by 5.8% ) in 2021. The Fund expected that the advanced economies, where the epidemic is spreading widely, and the spread of containment measures for the Coronavirus, will witness a decline in growth rates by (-6.1 percent) and reach (4.5%) in 2021. While the Fund expected that emerging markets and economies with all developing countries will face a health crisis, a severe shock in external demand, a major tightening in global financial conditions, and a drop in commodity prices, which will have a severe impact on the economic activity of commodity exporters.

# **Oil Prices**

Oil prices fell, with concerns about global demand for crude and economic growth fueled by the outbreak of the Coronavirus, in light of the non-OPEC producers not yet agreeing on further production cuts to support prices, after oil prices recorded in the international market in early January 2020 by about (66.2) dollars per barrel of Brent crude, and (61.1) dollars a barrel of American crude, but it fell due to the Coronavirus by (13.8 percent) for Brent crude and (14.7%) for American crude, so Brent crude fell on February 24, 2020, to (57.08) dollars a barrel. And US crude reached (52.1) dollars per barrel, and Brent

crude continued to decline to (49.5) dollars per barrel on February 28, 2020, while US West Texas Intermediate crude fell to a record 45.44 dollars per barrel.

The Organization of Petroleum Exporting Countries (OPEC) had urged to reduce production with its allies to (1.5) million barrels per day until the end of 2020, after the price of a barrel of oil reached between 19-20 dollars, but the lack of agreement between OPEC and Russia and the price war that it erupted between them at a time of unprecedented decline in global demand due to the closure procedures in various countries of the world following the outbreak of the Coronavirus and the suspension of work in many factories, which led to a significant decline in oil prices. (- 37.63) dollars as a result of oil companies having to rent huge oil tankers to store the excess crude, so the companies are paying buyers to transport the crude oil away from their facilities to avoid paying more money to store it.

These recent events in oil prices led to the return of dialogue to OPEC Plus and the agreement to reduce production, which in turn will lead to a decline in supply, in addition to the decision of the major oil companies in the world and the United States to reduce daily production as well. Despite this, it will not make a big difference, as the world already has a lot of crudes, which is a surplus that is greater than it can be consumed, and the matter does not depend only on the world's ability to consume this amount of crude, but the biggest crisis is the inability to store it until the current economic restrictions are eased.

#### The Price of Gold and Other Metals

On March 1, 2020, gold prices in global markets recorded a rise, heading towards achieving their largest weekly gains since late October 2011, due to fears that the outbreak of the Coronavirus will ravage the global economy. As the spot price of gold rose by (0.2%) to record (1674.20) dollars per ounce, and US gold futures rose by (0.4%) to record (1675.20) dollars, and this is because the markets expect more interest rate cuts and by avoiding risks what is happening now amidst the concerns of the markets.

While silver decreased by (0.4%) to record (17.34) dollars, and platinum lost (0.1%) of its value to reach (863.86) dollars. The metal used in automobile exhaust systems fell (13%) on February 28, after hitting an all-time high of \$2,875.50 on the last day due to a severe shortage of supply.

#### **International Repercussions and Financial Markets**

The outbreak of the Coronavirus has greatly affected the global economy, in other words, China was not affected alone, but these effects included many countries of the world, including the decline of stock exchanges in America and Europe due to Corona's fears. Among the economies most affected are the European Union (15.5 billion dollars), the United States (5.8 billion dollars), and Japan (5.2 billion dollars), and in light of the continuing fears in the economic circles due to Corona, the economic effects on the Arab oil-producing countries will undoubtedly be negative to a big limit.

The current prices are considered uneconomic in light of the estimates of the budgets of the Arab oil countries, which include the Gulf states in addition to Iraq, Libya, and Algeria, although there are other countries exporting oil and gas, even in small quantities, such as Egypt, these prices mean the continuation of the financing crisis in these countries, and their adoption on loans to finance the budget deficit, especially since most of them in preparing the 2020 budget went to different estimates of oil prices. Saudi Arabia, for example, prepared its budget estimates at \$55 a barrel of oil, and Algeria at \$45 a barrel, due to anticipation of the bad scenarios of the trade war crisis between China and America, but if it continues. But if prices continue to fall, there will be another darker reading on the

economies of the Arab oil countries, which will have a faster impact on the development of public budgets and the decline in trade.

While the 2019-2020 Corona Virus pandemic also affected the financial markets and left widespread severe economic turmoil, on February 24, 2020, the US Dow Jones Industrial Average and the British FTSE 100 Index declined by more than (3%) after the outbreak of the Covid-19 virus significantly spread. outside of China. This comes after stock indices fell sharply in the European continent, following the significant declines in Asia. The German DAX 30, the French CAC 40, and the IBEX 35 all declined by about (4%) and the FTSE MIB index fell by more than (5%).

This was accompanied by a significant decrease in the price of oil and a significant increase in the price of gold (the highest level in seven years). On February 27 - due to growing concerns about the outbreak of the virus, many US stock indices, including the Nasdaq 100, the S&P 500, and the Dow Jones Industrial Average recorded sharp declines not seen since the 2008 crisis, the Dow Jones index (1119) points in the largest decline since the 2008 financial crisis. On February 28, 2020, stock markets around the world posted their biggest drops in a single week since the 2008 financial crisis.

On March 12, stock markets in the Asia-Pacific region were closed (with Japan's Nikkei 225 index and the Tokyo Stock Exchange down less than (20%), below the 52-week high). European stock markets closed at 11% (the worst one-day drop in history), while the Dow Jones Industrial Average closed at an additional 10% (beating the one-day record set on March 9), and the NASDAQ fell (9.4%), the S&P 500 (9.5%) (With the Nasdaq 100 and the S&P500 also down more than 20% from their peaks), the decline revitalized trading restrictions on the New York Stock Exchange.

Oil prices fell (8%) while US Treasury yields for 10 years and 30 years rose to (0.86% and 1.45%), (the yield curve ended naturally). On March 15, the US Federal Reserve cut the benchmark interest rate by a full quarter of a percentage point to a target range of (0.25%) to (0%), but in response, the S&P500 and crude oil futures fell due to continued market concerns.

# Second: The Impact of the Coronavirus on Iraq

# Iraqi-Chinese Relations in the Field of Investment

The economic relations between Iraq and China expanded after 2003, to witness every year a jump in expanding its investments in the fields of energy in Iraq, as China seeks to invest billions of dollars in the energy infrastructure in Iraq, especially in the field of Iraqi oil fields in the center and south of the country, as Iraq represents strategic and military importance for the Chinese government, to ensure its grand strategy called (One Belt - One Road), which is supposed to link both Europe and Asia with China by 2050, so any relationship with the countries of the Middle East is very important for China because Its great need for oil and gas imports. China began investing in the large Al-Ahdab oil field in Wasit Governorate in 2008, as well as developing other fields in Bazarkan, Fakkah, and Halfaya in Maysan Governorate, in the southeast of the country.

In addition to all this, the oil refinery project in the port of Al-Faw in Basra, which two Chinese companies, China Power and Norco, are negotiating to implement, and this means that Chinese companies are still the largest investor in Iraq in this field. China's cumulative investments in Iraq exceeded \$20 billion, most of which are concentrated in the oil and natural gas field, after the total Chinese investment did not exceed (7%) in 2002, and Beijing strongly participates in the Iraqi oil industry, as the Chinese Petroleum Engineering and Construction Company signed in early 2019. With the Basra Gas Company in southern Iraq, a contract for gas investment in the Artawi field, west of the province, was also signed in early 2020, a contract for the investment of associated gas, in the Halfaya field in Maysan Governorate, southern Iraq, with the Chinese company "Petrogina" to invest (300) million cubic feet of gas. Gas and China also entered the field of railway support in Iraq, after concluding a contract in 2012 to supply (12) high-speed trains, with a value of (138) million dollars, and eight joint agreements were signed between the two countries in 2019 worth more than (500) billion dollars for the ten years. In the coming days, to make China the largest importer of Iraqi oil, in addition to announcing that Iraq will join the huge Chinese project known as the Belt and Road Initiative, a project that increases China's economic influence.

# Iraqi-Chinese Relations in the Field of Trade Exchange

The value of Iraq's trade exchange with China in 2018 amounted to about (30) billion dollars, as the trade balance between the two countries tilted in favor of China in the export of various types of goods and cars to Iraq (Table 1), compared to Iraq's export of oil, where China enjoys an estimated (800) thousand barrels per day. Iraq is the second-largest producer of crude oil in the Organization of Petroleum Exporting Countries (OPEC), with an average of (4.5) million barrels per day, and the third-largest oil exporter in the world in 2018 after Saudi Arabia and Russia. Iraq exported \$91.7 billion of this commodity, which represents (8.7%) of the world's exports which are located in the Middle East.

It is clear from Table (1) that most of the high import rates during the study period came from Asian countries, especially China, due to their low costs, and then Western Europe comes after them. China's imports had the largest share for years (2013, 2014, 2016, and 2018), as the percentage of imports from it reached (18.6%, 32.3%, 36.3%, 26.2%), respectively. As for imports from America, they reached the highest in 2010, reaching (24.7%), while some countries contributed a certain share of imports coming to Iraq, such as (Kuwait, the European Union, Germany....etc.).

Despite the great diversity of imported goods between consumer and investment, they contributed to absorbing the surplus of domestic demand, which was growing. Therefore, it will have a significant impact on Iraq's foreign trade, making Iraq face another economic crisis to be added to the current series of crises. If the virus continues to spread, it will lead to a global economic crisis with a significant increase in the prices of materials and goods, especially (Chinese) and auto parts, electrical and electronic appliances, especially after international shipping companies raised the value of insurances imposed on cargo coming from China, whose value is eventually added to the prices of these goods, in addition to the scarcity of Chinese goods, because international shipping companies have stopped shipping goods to many countries of the world, including Iraq.

	Table 1													
PERC	PERCENTAGES OF IRAQI IMPORTS (NON-OIL) ACCORDING TO THE MOST IMPORTANT TRADING PARTNERS IN THE WORLD FOR THE DEPLOD (2010, 2019) (9())													
	THE WORLD FOR THE PERIOD (2010-2018) (%)													
year	country													
2010	USA	China	Ukraine	South Korea	India	Japan	France	Germany	UAE	Kuwait	Other countries			
	24.7	14.1	7.6	6.8	5.7	5.2	4.7	3.6	2.6	2.5	22.5			
2011	European Union	China	USA	Thailand	Australia	South Korea	France	Japan	Iran	Germany	other countries			
	29	15	12	10	4	4	4	2	2	2	16			
2012	China	USA	Romania	South Korea	Thailand	India	Japan	Germany	UAE	iran	other countries			
	18.6	11.7	9.8	8.9	6.3	4.9	4	3	2.8	2.7	27.3			

Academy of Accounting and Financial Studies Journal

2013	China	European Union	USA	UAE	Japan	South Korea	Italy	Thailand	Germany	Iran	other countries
	28.2	7.7	7.5	6.8	6.3	5.5	4.9	4.8	3.1	2.6	22.6
2014	China	UAE	South Korea	USA	Japan	Italy	India	France	Union European	Iran	other countries
	32.3	17	8.9	7.5	4.8	2.8	2.5	2.3	2	1.8	18.1
2015	Turkey	China	South Korea	USA	Iran	France	Italy	Germany	Brazil	India	other countries
	21.7	16.4	11.7	7.4	5.5	5.5	4.3	4	3.3	3.1	17.1
2016	China	Jordan	European Union	South Korea	Iran	Germany	Japan	Italy	Mexico	USA	other countries
	36.3	13.9	13.1	9.5	4.1	3.2	2.6	2.2	1.9	1.8	11.4
2017	Iran	Italy	China	South Korea	Turkey	USA	Union European	India	Brazil	EUA	other countries
	30.1	11.4	11.1	9.6	5.6	5	4.4	2.6	2.1	2	16.1
2018	China	Iran	USA	South Korea	Union Russia	Brazil	Turkey EUA Union In- European		India	other countries	
	26.2	11.9	9.8	6.5	6.4	5.7	5.5	4	3.8	2.2	18

Source: Ministry of Planning, Central Bureau of Statistics, separate years

Concerning exports, Iraq is the fourth-largest supplier of oil to China, as the value of Iraq's exports to Beijing, only in 2018, amounted to more than (22 billion and 400 million US dollars), which is equivalent to more than (23%) of the value of the federal general budget of Iraq, according to the World Top Exporter website. This means that Iraq will be affected by any expected decrease in energy imports by China. Iraq's oil exports may be affected if OPEC starts to reduce exports, because due to the suspension of Chinese factories and the possibility of the virus spreading to the rest of the Chinese industrial cities, it is not excluded that China will resort to reducing its global oil imports, especially since the surplus in the oil supply has reached to one million barrels per day, and this is what made OPEC reduce countries' shares of oil exports, and this, in turn, will affect Iraq.

Concerning trade partnership with Iraq, the Asian countries ranked first in Table (2), as these countries were an important market for Iraq's exports. The proportion of Iraq's exports to Asian countries amounted to (61.4%) for the years 2016 and 2017, then increased to (64.4%) in 2018. Then came Western European countries in the trade partnership, as the contribution of Iraq's exports to that region amounted to (24.3%) in 2016 and 2017, then it declined to (20%) of the total exports, and the contribution of exports to both North American and Arab countries reached (7.8%), 4.5%) of the total exports for the years 2016 and 2017, respectively, while the year 2018 reached (12.7%, 2%) of the total exports, respectively, and the percentage of Iraq's exports to the rest of the world constituted (1.2%) of the total exports in 2018, as shown in the table (2).

Table 2 PERCENTAGES OF IRAQI EXPORTS ACCORDING TO THE MOST IMPORTANT TRADING PARTNERS IN THE WORLD FOR THE PERIOD (2016-2018) (%)										
Country	Contributing to total Exports in 2016 %	Contribution To Total Exports in 2017 %	Contribution to Total Exports in 2018 %							
Arab countries	4.5	4.5	2							
Western European Countries	24.3	24.3	20							
Eastern European countries	0	0	0.6							
Asian countries	61.4	61.4	64.4							

Academy of Accounting and Financial Studies Journal

African countries except Arab	0.2	0.2	0
North American countries	7.8	7.8	12.7
South American countries	0.9	0.9	0.3
Oceania	0	0	0
Total	100	100	100

Source: Central Bank of Iraq / Department of Statistics and Research / Department of Balance of Payments and Foreign Trade

It is expected that there will be a negative impact on the Iraqi economy as a result of the spread of the Corona virus, through:

# **Economic Growth**

According to the World Bank report, the gross domestic product is expected to shrink by (9.7%) during 2020, as a result of:

- i. The decline in oil prices due to the decrease in demand for oil compared to the excess supply of it in the global market, especially since oil constitutes more than (60%) of the gross domestic product.
- ii. Allocating new government funds to face the crisis, which made Iraq face new financial commitments that could have been directed to different investments.

And what reinforce this expectation are the conditions that already existed in Iraq before the crisis, which will limit its ability to manage and mitigate the economic and social effects resulting from low oil prices, reducing oil production quotas, and the obstacles created by the special measures to confront the outbreak of the Coronavirus.

# **Inflation Rate**

- i- The rise in the prices of imported goods, especially that Iraq relies heavily on imports to cover its needs of goods and services and reliance on the outside world to meet the increase in the volume of aggregate demand for these goods and services.
- ii- Food supplies, goods and merchandise are affected by regional developments (the Corona crisis), and it is expected that local prices will rise in the long term for food and other goods, especially in light of the continued suspension of international shipping companies from shipping goods to countries of the world, including Iraq.

# **Financial Conditions**

If the impact of the Corona virus continues on the global demand and the oil market, the Iraqi public budget will be affected, which will make the industrial countries reduce the volume of their oil imports and will therefore affect Iraqi exports, and since the bulk of Iraq's budget comes from oil sales, therefore any impact on prices will be reflected on the country's imports and the budget especially after the significant decline in oil prices leads to an increase in the deficit in the public budget, which means a decrease in public revenues compared to public expenditures, in light of the continuation of the price of a barrel of oil estimated for the 2020 budget at less than (50) dollars per barrel, accompanied by an increase in public debt from domestic and external sources to finance the Budget deficit. According to World Bank estimates, the budget deficit will exceed (29%) of GDP in 2020, and the total financing needs will reach (67) billion dollars. In this situation, financing options may be limited.

# **External Situations**

It is expected that the external economic situation of Iraq after the outbreak of the Coronavirus will witness a noticeable deterioration in conjunction with the governmental measures that are taken towards the movement of transport in general and the blocking of most border crossings with several countries, which leads to the cessation of trade exchange and the movement of tourism with those countries, in addition to a decrease in Iraqi imports. With most of its trading partners, especially China, in conjunction with restrictions on air traffic to and from countries of the world. Iraq is expected to run a persistent current account deficit in 2020, mainly driven by low oil prices and steady imports.

# **Monetary Conditions**

The decline in oil revenues will have an impact on monetary variables as follows:

- i- The stability of the Iraqi dinar exchange rate and this is due to the monetary policy's commitment to the stability of the exchange rate, which comes within the priority objectives of the Central Bank of Iraq.
- ii- A deficit in the current account, as well as the decrease in foreign reserves to cover the difference and bridge the gap between its dollar sales and its purchases from the Ministry of Finance, which will decrease due to the decrease in government oil revenues, especially since the reserves of the Central Bank undertake in one of its functions the financing of foreign trade for the private sector through meeting the banks' requests through the foreign currency sale window, the Central Bank's sales volume is expected to increase to finance those imports, in addition to maintaining the Iraqi dinar exchange rate on the market, soon parallel to the exchange rate, to ensure price stability. However, in the short term, the Central Bank's sales will witness a decline as a result of the decline in imports and the closing of the borders between the countries of the world, which will maintain foreign reserves during the first half of 2020. It is expected that the imports of the private sector will increase in the long term during the second half as a result of Iraq's dependence on imports in a way Large, which requires compensating the shortage of goods and services due to the outbreak of the Coronavirus.
- iii- Regarding the investment portfolios of the Central Bank of Iraq, they are diverse and include a basket of foreign currencies, bonds, and gold, which reduces the risk of fluctuations in foreign exchange rates and its impact, will be very simple in the short term. The month of January witnessed a decline in the exchange rates of the Euro, the British pound, and the Australian dollar against the US dollar, while the Chinese yuan witnessed an increase against it.

Table 3   ACTUAL RATIOS OF FOREIGN RESERVES AS AT 31/1/2020 (BILLION DOLLAR)											
Currency	urrency Amount Actual Too		Tool	Amount	Actual Percentage						
US dollar			Current account								
Euro			Treasury Transfers								
GBP			Term Deposit								
Australian dollar			government bonds								
Chinese Yuan			Islamic Sukuk								
Total*			Total **								
			Gold								

\*Excluding SDR, Gold and Ministry of Finance account.

\*\* Including the balance of the account of the Ministry of Finance.

As for our assets in gold, the risks they are exposed to are only related to the relationship between the price of gold and the dollar currency, as it is the currency that has been known since the end of the Second World War for the pricing of most global commodities such as oil, gold, silver, and copper. Continuous gold is a real and valid indicator of loss of confidence in the dollar and investors turn to gold and sell them dollars. The prices of gold in the global market are subject to rising and fall for many reasons, including political and economic events and speculative operations by investors.

# Measuring Iraq's Loss as a Result of the Oil Crisis and the Coronavirus

The loss of Iraq as a result of the oil crisis and the Coronavirus was measured through the following estimated model:

Table 4 SYMBOLS USED IN STANDARD ANALYSIS							
Symbol Variable							
YS	central bank foreign currency reserves						
IM	Imports						
BD	dollar purchases						
Ex	official exchange rate						
SD	dollar sales						
EP	exports						
Т	time						

# **Model Estimation**

The model is estimated using the Ordinary Least Squares (OLS) method and its results are adopted standard after passing all the tests for the model's hypotheses. The formula used in the estimation was the natural logarithmic formula, which is the best formula by which the best-estimated results are reached. The results of the estimation were as shown in Table (5) as follows: -

Table 5 THE RESULTS OF ESTIMATING IRAQ'S LOSS AS A RESULT OF LOW OIL PRICES AND THE CORONA VIRUS														
Α	Model							$R^2$		F	D W	CDD	Vlain	p-
В	Constant	NLogIM	NLogBD	NLogEX	NLogSD	NLogEP	Т		R <sup>2</sup>	ľ	D.W	SPR	Klein	value
NLogys	4.13	-0.706	1.186	-0.429	-0.18	0.28	0.03	98.70%	99%	24.1	2.01	Nil	Nil	0

Source: From the work of the two researchers based on the ready program (Eviews 10). NLogYS = 4.130 - 0.706 NLogIM + 1.186NLogBD - 0.429NLogEX + 0.180NLogSD + 0.280NLogEP - 0.033Tt = (0.58) (4.37) (5.729) (0.489) (2.9) (3.6) (3.32)

The estimated equation shows that an increase in imports by (1%) leads to a decrease in reserves by (0.706)%, and an increase in dollar purchases by (1%) leads to an increase in reserves by (1.186%), and an increase in the exchange rate (depreciation of the currency) by (1%) leads to a decrease in reserves by (0.429%) due to the increase in demand for foreign currency (the US dollar) due to the increase in imports and to cover the daily commercial transactions that are constantly increasing with the entry of new goods and merchandise to the local markets, and this increase in the demand for foreign currency means an increase in the supply of local currency in the foreign exchange market, and that an increase in dollar sales by (1%) leads to a decrease in reserves by 0.180%), and an increase in exports by (1%) leads to an increase in reserves by  $(280 \ (0\%)$ . To take into account other variables not included in the model, the time trend variable (T) was added to reflect the impact of the economic conditions and crises experienced by the country during the study period, which monitored a decreasing trend of reserves by (0.333).

# Third: Suggested Scenarios for Resolving the Crisis in Iraq

Crude oil was not spared from the Corona crisis, as its prices fell significantly in early 2020 as a result of a significant drop in global demand for oil and its derivatives, which led to a glut in the markets and a surplus in global supply, which led to an escalation of voices and pressure on OPEC to reduce production. On 9-April, the oil-producing countries agreed to reduce by (10) million barrels per day for OPEC Plus countries and (5) million for those outsides of OPEC Plus, and then the quantity will be reduced gradually with the development of the global situation.

The question here is, will this reduction raise oil prices to their previous levels between 60-70 dollars per barrel?

The answer is that this reduction may not raise oil prices to their previous levels at least until mid-2021 if we take into account controlling the epidemic in the second half of 2020 or even with the return of economies to work at least in the second half of this year, and in In light of the crisis scenarios, the following can be expected:

- i- Sectors of the economy will not easily return to work as they were as a result of the bad economic conditions that individuals experienced during the first half of the year, which requires If the epidemic subsides during the second half of this year, all them not to spend excessive time in leisure to compensate for what they missed. Many of them bear additional burdens of debts and financial dues during that period and need additional effort to compensate for this on the one hand, on the other hand, reluctance to travel and recreation or even purchase luxury goods because they are psychologically and financially affected by the crisis, and this leads to a lack of demand in many economic fields interlinked with Some of which are ultimately related to the individual's behavior after the crisis.
- ii- If, God forbid, the epidemic did not recede and the ban was broken due to economic conditions, this means that individuals will behave and consume like the case of the ban, i.e. they will focus on the necessary goods only, noting the depletion of lives and money and the fear of people, which will be considered the biggest disincentive to consumption and therefore the demand will not change much from what it is today.

If the first scenario is realized, the world has now stored enough with slightly lower demand than in 2019 as a result of stopping many activities or declining demand for them, and the average oil prices will range between 35 and 45 dollars per barrel with slight and continuous improvement in 2021.

But if the second scenario is realized, the oil demand will not change from the beginning of 2020, even with the return of necessary economic activities as a result of the decline in demand, but it may drop further to range between 25-35 dollars per barrel as a result of the psychological conditions experienced by individuals.

Accordingly, the dramatic decline in world oil prices (from \$100 at the beginning of 2014, to \$30 in its last days) made the oil-producing countries whose budgets depend in large proportions on oil revenues the biggest losers, and among the most prominent of these countries, of course, is Iraq, which remained in the last as a result of his lack of seriousness in creating diversified sources of revenue, the estimate of the 2020 budget came to reflect a state of confusion and fear of the following in the face of the days, this fear stems from the large deficit that this budget suffers from. From our side, we propose scenarios in addition to the

pressure of public spending and the enhancement of non-oil revenues, represented by the following:

# The First Scenario is to solve a Crisis in Cooperation with the Banking System

Using marginal tendencies such as an increase in the marginal propensity to save and a decrease in the marginal propensity to consume, which contributes to reducing aggregate demand, as well as reducing the phenomenon of hoarding, through the following:

Issuing details of returns and deadlines for Islamic and conventional savings certificates for the benefit of the Ministry of Finance

Some banks allow customers to issue savings certificates that comply with Islamic law, intending to attract the segment of customers who do not deal with traditional banking products, and prefer Sharia-compliant products. Banks set specific controls for calculating the return on these certificates under Islamic law, represented in determining an estimated average return on the certificates, subject to rise or fall according to the net annual revenues on the bank's business.

Banks set deadlines for certificates ranging from 3 years, 4 years, 5 years, 7 years, and sometimes 10 years, and the return on the certificate varies according to the monthly, quarterly, semi-annual, annual, or cumulative return periodicity, according to Certification rules specified by the bank.

The banks allow the customer to break the certificate before its maturity, provided that 6 months have passed since the purchase of the certificate, but after deducting a specific fine on the certificate, according to the instructions signed by the customer.

Any customer to issue an Islamic certificate needs to submit documents, and open a savings account in the bank to automatically add the value of the return from the certificate to the customer's account.

Details of the Islamic investment or savings certificates, with another presentation of the return on the certificates as follows:

The bank offers three types of Islamic Sharia-compliant savings certificates:

**The First**: the investment certificate for a term of 2 years with an approximate average return of up to 13% annually, and the return is disbursed every 3 months, and the value of the certificate starts from (100,000) dinars.

**The Second**: An "investment" certificate for a term of 3 years, with an approximate average return of about 13% annually, and the return is paid monthly, and the value of the certificate starts from (100,000) dinars as a minimum.

**The Third**: An "investment" certificate with a term of 5 years, with an approximate average return of about 14% annually, to be added to the certificate every 3 months, and a return is also calculated on it, and so on until the certificate's maturity date. The bank offers other types of Islamic Sharia-compliant savings certificates with different returns, which are:

**The First**: a certificate with a term of 2 years, the return is paid monthly, and the minimum purchase price starts from (100,000) dinars.

**The Second**: a certificate with a term of (4) years and the return is paid annually, and the minimum purchase price starts from (100,000) dinars.

It offers a product under the name "Islamic Sukuk" with a term of (2) years, and the average return varies according to the periodicity of return disbursement and ranges between 11.5 and 12.0% annually on the monthly return periodic, and between 12.5% and 13.0% annually on the quarterly return periodic The minimum purchase of the certificate starts from (100,000) dinars.

A savings certificate compliant with Islamic law under the name "Al Murabaha" for a term of 3 years with an average return of 12% annually, and the return is paid every 3 months, and the minimum purchase of the certificate starts from the first (100,000) dinars.

The "monthly income" certificate for 3 years with an average return of 10% annually, and the return is paid monthly, and the minimum purchase of the certificate starts from (100,000) dinars.

Noting the use of these funds to finance investment spending and the productive sectors to match the ultimate goal of these Islamic tools, which is to invest in productive projects because their returns depend on Murabaha, and perhaps these sectors generate social returns for the community.

The second scenario is the solution of the crisis by the Central Bank and the Ministry of Finance

#### CONCLUSION

Continuing to collect loan installments from employees exclusively and directing the amounts of these loans to the account of the Ministry of Finance and considering them as one of the internal public debt tools and paying them to banks after the end of the crisis. The issuance of bonds by the Central Bank for individuals and institutions, similar to the bonds that were launched in the eighties of the last century under the name Corona crisis bonds (whether they are mandatory or optional), and this type is very useful for the economy, as it reduces inflation rates and helps reduce the budget deficit. Progressively raising tax rates on incomes, even though this option will not lead to large revenues due to our inflexible tax system.

Reducing government spending by 59% on all aspects of expenditures (the governorates, ministries, the Kurdistan region, the development of the regions, the investment budget), and this option also means reducing government spending that leads to economic stagnation, but at lower rates. The new monetary issuance method (currency printing), and this type of financing also leads to rising inflation rates. But the economic fact that we must know in this regard is that when the deficit results from a sharp decline in the export resources on which the government depends to finance its public spending (as is happening in Iraq today), then financing the deficit does not lead to inflationary pressures, but on the contrary, the reluctance to finance the deficit It leads to an unjustified decline in the levels of income and well-being. Since the Central Bank Law does not allow the financing of the budget deficit directly, the Ministry of Finance must issue treasury bills and bonds in the primary market, and then the Central Bank buys them from the secondary market, as was done in the 2014 crisis. To achieve the desired goals of these proposed scenarios, they must be greatly supported by the media to transform the behavior of the Iraqi citizen from a consumer to an investor and to mobilize national savings.

#### REFERENCES

- Maria Antony, L.T., & Abdullah Hamad, A. (2020). A theoretical implementation for a proposed hypercomplex chaotic system. *Journal of Intelligent & Fuzzy Systems*, 38(3), 2585-2590.
- Thivagar, M.L., & Hamad, A.A. (2019). Topological geometry analysis for complex dynamic systems based on adaptive control method. *Periodicals of Engineering and Natural Sciences (PEN)*, 7(3), 1345-1353.
- Thivagar, M.L., Ahmed, M.A., Ramesh, V., & Hamad, A.A. (2020). Impact of non-linear electronic circuits and switch of chaotic dynamics. *Periodicals of Engineering and Natural Sciences (PEN)*, 7(4), 2070-2091.
- Barik, R.K., Patra, S.S., Patro, R., Mohanty, S.N., & Hamad, A A. (2021). GeoBD2: Geospatial Big Data Deduplication Scheme in Fog Assisted Cloud Computing Environment. In 2021 8th International Conference on Computing for Sustainable Global Development (INDIACom), 35-41, IEEE.

Hossain, M.K., Hossain, A., & Sadi, R. (2013). An examination of the relationship between stock market and economic growth: A study in Malaysia. *Journal of Transformative Entrepreneurship*, 1(2), 124-133.

- Barik, R.K., Patra, S.S., Kumari, P., Mohanty, S.N., & Hamad, A.A. (2021). A new energy aware task consolidation scheme for geospatial big data application in mist computing environment. In 2021 8th International Conference on Computing for Sustainable Global Development (INDIACom), 48-52, IEEE.
- Zhang, G., Guo, Z., Cheng, Q., Sanz, I., & Hamad, A.A. (2021). Multi-level integrated health management model for empty nest elderly people's to strengthen their lives. *Aggression and Violent Behavior*, 101542.
- Hamad, A.A., Al-Obeidi, A.S., Al-Taiy, E.H., Khalaf, O.I., & Le, D. (2021). Synchronization phenomena investigation of a new nonlinear dynamical system 4d by gardano's and lyapunov's methods. *Computers, Materials & Continua, 66*(3), 3311-3327.
- Khalaf, O.I., Ajesh, F., Hamad, A.A., Nguyen, G.N., & Le, D.N. (2020). Efficient dual-cooperative bait detection scheme for collaborative attackers on mobile ad-hoc networks. *IEEE Access*, *8*, 227962-227969.
- Thivagar, L.M., Hamad, A.A., & Ahmed, S.G. (2020). Conforming Dynamics in the Metric Spaces. *Journal of Information Science and Engineering*, *36*(2), 279-291.
- Mukhopadhyay, B., Pradhan, R.P., & Feridun, M. (2011). Finance-growth nexus revisited for some Asian countries. *Applied Economics Letters*, 18(16), 1527-1530.
- Nowbutsing, B.M., & Odit, M.P. (2009). Stock market development and economic growth: The case of Mauritius. International Business & Economics Research Journal (IBER), 8(2).
- Tripathi, M. (2021). "Facial image denoising using AutoEncoder and UNET", Heritage and Sustainable Development, 3, 2, 89–96.
- Ogunrinola, I.I., & Motilewa, D.B. (2015). Stock market liquidity and economic growth in Nigeria (1980 to 2012). Journal of economics and international Business management, 3(6).
- Ovat, O.O. (2012). Stock market development and economic growth in Nigeria: Market size versus liquidity. *Canadian Social Science*, 8(5), 65-70.
- Pesaran, M.H., Shin, Y., & Smith, R.J. (2001). Bounds testing approaches to the analysis of level relationships W. K. Wong, F. H. Juwono, W. N. Loh, and I. Y. Ngu, "Newcomb-Benford law analysis on COVID-19 daily infection cases and deaths in Indonesia and Malaysia", *Heritage and Sustainable Development*, 3, 2, 102–110.
- Al-Ghamdi, L.M. (2021). "Towards adopting AI techniques for monitoring social media activities", *Sustainable Engineering and Innovation*, 3, 1, 15-22.
- Sahin, A., & Unlu, M.Z. (2021). "Speech file compression by eliminating unvoiced/silence components", *Sustainable Engineering and Innovation*, *3*, 1, 11-14, *Journal of applied econometrics*, *16*(3), 289-326.
- Shin, Y., Yu, B., & Greenwood-Nimmo, M. (2014). Modelling asymmetric cointegration and dynamic multipliers in a nonlinear ARDL framework. In Festschrift in honor of Peter Schmidt, 281-314, Springer, New York, NY.
- Yeyati, E.L., Schmukler, S.L., & Van Horen, N. (2008). Emerging market liquidity and crises. *Journal of the European Economic Association*, 6(2-3), 668-682